

Reshetin. It should be noted that Reshetin deals with the readability of a signal light while the present invention deals with providing certain types of radial lighting. For example Figs. 1-7 deal with providing light in a manner which provides an evenly illuminated area radially around the fixture 1. In order to accomplish this the present invention provides radially collimated light. This is accomplished by using a "ring" lens which surrounds the light source or partially surrounds it. The Office action states that Reshetin has a radially collimating first lens 7. However this is not correct. Radially collimated light means that the light is generated outwardly of the light source radially around the axis of the light source. [In the patent this is a vertical axis which passes through the light source as seen, for example, in Fig. 7] In the reference patent, if there were radial light beams they would be projecting upwardly out of the paper, downwardly into the paper, to the right, and to the left (in the case of surrounding radial light). However, Reshetin only provides light in the form of a rod or a circular band of rays, and only in a single direction. This is understandable since Reshetin is concerned with traffic signals which need only direct light in one direction, as opposed to the present invention which provides radially projected light.

There is no surface shown for the light in Reshetin to impinge upon. Again this is understandable, since, while the present invention deals with lighting an area, the reference is concerned with the visibility of a traffic signal.

The claim recites a ring or annular lens which at least partially radially surrounds the light source. The reference patent is totally lacking this feature.

The reference patent lens 7 does not even partially surround the light source and in any event does not provide radially collimated light.

Concerning claim 2 the Office action states that lens 7 of the patent is the secondary lens. However, the rejection of claim 1 states that lens 7 is the first lens. Lens 7 of the reference cannot be both elements of the claim.

Concerning claim 3, it has already been pointed out that the lens 7 of the patent does not radially surround the light source. In fact, it does not surround the light source in any manner.

As for claim 4, the reflector 2 of the patent is not located above the light source as recited in the claim; it actually is above and below and to the sides of the light source, but it does not have the claimed recitation of being *located* above the light source.

In claim 5 there is a second reflector. However the patent reflector 2 is the first reflector and therefore the terms of the claim are not met, since the claim calls for two reflectors.

As for claim 6 the rejection is using lens 7 twice and this is not a proper rejection. In the rejection of claim 1, from which claim 6 ultimately depends, lens 7 is said to be the collimating lens, and in the rejection of claim 6 lens 7 is said to be the optical element. In any event, claim 6 recites two Fresnel lenses and this is not shown in the patent.

The rejection of claim 7 is not understood and clarification is requested. For example, "the Fresnel lens is a position of and joined to the lens mains."

As for claim 8, it should be noted that rays 11 are incoming, not outgoing, rays. Also, the reflector 23 does not partially surround the light source radially, and there is no surface onto which the light impinges.

Concerning claim 9 the Fresnel lens does not partially radially surround the light source since it is described as being narrow.

As for claim 10, the lens ring is said to be the reflector 23 when rejecting claim 8. This same element cannot also be the Fresnel ring segments, since the patent does not teach the use of a Fresnel lens for the reflector 23.

Claims 11-25 have been rejected under 35 USC 103(b) as being anticipated by Sugawara.

Concerning claim 11, the Sugawara patent does not have ring lenses, but has a basically flat Fresnel lens at the front of the illuminating device.

As for claim 12 the patent does not have the Fresnel lenses at an angle with respect to one another.

For claim 13, there is no "diameter" in the patent since the lenses are not ring lenses.

As for claim 15 the light source of the patent is not movable as stated in the claim.

As for claim 17 there is no third Fresnel lens in the patent.

As for claim 18 the lenses are not on the opposite sides of the light source.

The patent does not have the structure recited in claims 19 and 20 and 21.

As for claim 23 the third lens cannot be element 15 since the equivalent of this (25) was used from Fig. 3 of the patent.

Claims 26-35 have been rejected under 35 USC 102(b) as being anticipated by Simon ('201).

As for claims 26 and 27, the reflector 20 of the patent is not on the "other" side of the light source as recited in the claims.

As for claim 29 there are not a plurality of radially collating ring lenses but only one lenses having zones.

As for claim 30, the refracting ring in the patent does not at least partially

surround the ring lens.

The Figs 10-12 of the patent do not show the structure of claim 32.

As for claim 33 there is no refracting ring 20 in Figs 20-30 of the patent.

As for claim 34, the patent does not disclose in connection with Fig. 46 and reflectors 110 and 112 that they have the structure recited in claim 34. For example, that one is parabolic and projecting a collimated beam and the other two being ellipsoidal and projecting a combined converging beam.

As for claim 35 a cone reflector is not seen in the patent in Figs. 24-25.

Therefore, it is believed all of the rejections of the claims should be withdrawn and all of the claims allowed.

A request for extension of time for two months is being filed herewith so that this response is timely.

Respectfully submitted,



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Date: June 24, 2002

Claim Attachment

1. (amended) A luminaire having a quasi point light source near a surface onto which light rays may impinge, comprising:
 - a lens system which includes
 - a first optical element in the form of a radially collimating first ring or annular lens at least partially surrounding the light source and collimating at least some of the light from the source to impinge upon a surface, and
 - a second optical element for receiving light rays and directing the rays to impinge upon the surface at a position radially or concentrically closer to the lens system than the rays from the [Fresnel] ring lens
2. (amended) A luminaire as defined in claim 1 wherein wherein the ring lens is a Fresnel lens said second optical element is a secondary lens and receives light rays from at least a portion of the Fresnel lens.
4. (amended) A luminaire as defined in claim 1 wherein said second optical element is a first reflector that radially distributes light and located above the light source.
6. (amended) A luminaire as defined in claim [1] 2 wherein said second optical element is a radially collimating second Fresnel lens which refracts light rays from the source to impinge upon the surface in an area closer to the lens system than the rays from the first Fresnel lens.
8. (amended) A lighting assembly having a quasi point light source near a surface onto which light rays may impinge, comprising:
 - two canted lens ring segments at least partially surrounding the light source radially and collimating at least some of the light from the source to impinge upon a surface,
 - said lenses each having an axis which is at an angle to refract light rays from the source toward the surface.
26. (amended) A lighting assembly, comprising:
 - a quasi point light source;
 - a radially collimating ring lens [at least] only partially surrounding said light source;
 - a reflector on the other side of the light source from said ring lens arranged to reflect light in the same radial plane as projected by the ring lens.

34. (amended) A lighting assembly, comprising:
a quasi point light source;
a reflector assembly, having three reflector sections, one [obeing] being
parabolic and projecting a collimated beam and the other two sections being
ellipsoidal and projecting a combined converging beam, the reflector assembly
being constructed and arranged to produce a 180 degree in section columnar
beam having varying divergence and concentric brightness.